

RESPONSE UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/937,220
Attorney Docket No. Q65416

REMARKS

I. Introduction

Claims 1-3 have been examined and are rejected. Specifically, claims 1-3 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,434,380 to Magara et al. (hereinafter “Magara”). Additionally, claims 1 and 2 of the present application are rejected on the grounds of double patenting, as set forth on pages 2-3 of the Office Action, based on U.S. Application No. 6,501,232 to Goto et al. (hereinafter “Goto”).

The Examiner is respectfully requested to reconsider and withdraw these grounds of rejection for at least the following reasons.

II. Double Patenting Rejections

As noted above, claims 1 and 2 of the present application stand rejected on the grounds of double patenting, in view of Goto. Applicants submit herewith a Terminal Disclaimer to overcome this grounds of rejection.

III. Art Rejections

As noted above, claims 1-3 stand rejected under § 102(b) as allegedly being anticipated by Magara.

Claim 1 recites an electric discharge current pulse control unit that controls various parameters “so that a quantity of supply of hard coat material by the emission of electrode

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material is a predetermined value determined according to a predetermined processing condition.” For example, the control unit sets a first pulse width and a first peak value so that an electric current density between the electrodes is in a predetermined range which suppresses emission of electrode material, wherein extension of an electric discharge arc column occurs during the period of the first pulse width. Additionally, the control unit sets another pulse width and peak value (*i.e.*, the k-th pulse width and the k-th peak value) so that a quantity of supply of hard coat material by the emission of electrode material is a predetermined value determined according to a predetermined processing condition.

The Examiner alleges that Magara discloses the recited first pulse width, first peak value, k-th pulse width and k-th peak value by disclosing a current pulse supplied to the electrode (Office Action: page 3, *citing* Magara: Fig. 16(b)). Assuming this statement to be correct, Magara performs this function, and sets the values of pulse width, peak current, off time and auxiliary current, and parameters including electrode material and polarity, limiting resistance and dielectric mixture with the aim of reducing surface roughness (Magara: col. 8, line 65 to col. 9, line 46). In other words, the embodiment of Magara relied upon by the Examiner is completely optimized with one purpose in mind, namely to obtain “a mirror surface of the lowest surface roughness” (Magara: col. 9, lines 37-39).

The disclosure of Magara referred to above makes it plainly apparent that Magara is not seeking in this embodiment to supply a hard coat material by the emission of electrode material. Magara discloses quite the opposite. In particular, Magara teaches that machining should be carried out using a dielectric which contains silicon particles (*see, e.g.*, Magara: col. 9, lines 10-

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11). Using such a dielectric prevents electrode material from sticking to the workpiece. Specifically, “[d]isposing the silicon particles in such a manner ensures that almost all of the particles adhered to or absorbed into the workpiece are silicon particles rather than electrode material” (Magara: col. 5, lines 24-31).

This disclosure makes it quite clear that it is impossible for Magara to form a “hard coat material by the emission of electrode material,” as claimed. In Magara, any emitted electrode material does not stick to the workpiece surface. It follows that Magara does not disclose “that a quantity of supply of hard coat material by the emission of electrode material is a predetermined value determined according to a predetermined processing condition,” as claimed.

For at least the above exemplary reasons, claim 1 is not anticipated by Magara. Claims 2 and 3 recite features similar to those found in claim 1. Accordingly, claims 2 and 3 are not anticipated by Magara, based on a rationale analogous to that set forth above for claim 1.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

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Respectfully submitted,



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